



A STUDY ON EFFICACY OF THE CONSTRUCTIVIST APPROACH ON ACADEMIC ACHIEVEMENT OF SOCIAL SCIENCE STUDENTS OF UPPER PRIMARY LEVEL

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ABSTRACT

The aim of this study was to compare the academic achievement of the learners in experimental group (taught by constructivist approach) and controlled group (taught by traditional approach). Quasi-Experimental method was used in the present study. The sample of the present study consisted of 80 social science students of upper primary level (CBSE Board) Punjab International Public School, Pipal Majra. The selection of the school had been done through purposive sampling method. Further, simple random sampling method was used to divide the students in two groups A Self-made achievement test of social science was administered to all the students in the sample. The test was conducted on two occasions as a pre-test and as a post-test. Data was analyzed t-test, ANOVA and ANCOVA. Result showed that the performance of social science students taught with constructivist approach was better than that of group taught by traditional approach. The students in experimental group were more active during the learning process and they had taken up their responsibility for learning. Constructivist approach can be considered as an effective method of student-centered learning.

KEYWORDS: *Constructivism, Academic Achievement, Social Science.*

INTRODUCTION

Constructivism is a learning theory which states that people learn best when they actively construct their knowledge. Knowledge construction can be made possible by solving authentic problems, which usually requires collaboration with others (Duffy, Lowyck, Jonassen, 1993). In addition to the real world or authentic problems and collaboration, another essential element of constructivist approach is the learner's prior knowledge. Learners will not be able to solve any given problem unless they have the relevant prior knowledge and skills. The constructivist view of learning is based on the premise that learners construct their own personal meaning out of a given education experience. Constructivism is a theory of knowledge that argues that humans generate knowledge and meaning from an interaction between their experiences and their ideas. During infancy, it is an interaction between their experiences and their reflexes or behavior-patterns. Piaget called these systems of knowledge schemata. Piaget asserts that learning occurs by an active construction of meaning, rather than by passive resilience. He explains that when a learner, encounters an experience or a situation that conflicts with his current way of thinking, a state of disequilibrium or imbalance is created. He must then alter his thinking to restore the equilibrium or balance. To do this, he makes sense of the new information by associating it with what he already knows, that is, by attempting to assimilate it into his existing knowledge. When he is unable to do this, he accommodates the new information to his old way of thinking by restructuring his present knowledge to a higher level of

thinking. Learning is today's classroom happens in a social context since there is students-teacher and students-students interaction.

JUSTIFICATION OF THE PROBLEM

The traditional notion of social science teaching, which intends to make individuals to gain social identity depends on a teacher centered instruction, which grounds the belief that the best teaching occurs in a quiet teaching environment, where the teacher symbolizes the wisdom and the authority. Such a teaching notion abstracts the teacher from the classroom, uses the course book as the only teaching material and requires the learners to study on their own. Though the limitations of the traditional teaching are apparent, nowadays some skills such as updating, practicing, criticizing and analyzing the knowledge are gaining importance. The constructivist theory which plays an important role in the field of education recently arouses the interests of the experts in the field of social science teaching in terms of designing a curriculum which enables the students to learn through practicing, problem solving and decision-making. The researcher surveyed some of the related literature available in this field. The researcher found out that very limited work has been done in the field of social sciences with regard to constructivist approach. The areas so far explored had been engineering, information technology, mathematics, physics, biology etc. Hence, the researcher of present study can emphatically state that her attempts are novel in this field that she has designed her study on an Indian sample. So, the present study is novel in all aspects. The present study is conducted to study the impact of constructivist approach on academic achievement of upper primary level students. The present study might be considered significant as it emphasizes on student's autonomy, acceptance of student's involvement, effective dialogue between students & teacher and students & students and discussion.

OBJECTIVES OF THE STUDY

- To study the effectiveness of teaching social science through constructivist approach on the upper primary level students' academic achievement in social science.
- To study the effectiveness of constructivist approach in teaching of social science on the academic achievement in social science of upper primary level students belonging to different levels of intelligence (low, average and high).

HYPOTHESES

1. The experimental group performs better on academic achievement in social science as a result of learning social science through constructivist approach when compared to control group.
2. The constructivist approach has a differential effect over the academic achievement in social science, among the low, average and high intelligent group of upper primary level students belonging to experimental group when compared to control group.

DELIMITATION OF THE STUDY

- The sample is collected from upper primary level students of Chamkaur Sahib City of Ropar District.
- The study is delimited to only four chapters of social science textbook of 8th class.
 - I. Resources
 - II. Land, Soil, Water, Natural Vegetation and Wild Life Resources
 - III. Mineral and Power Resources
 - IV. Agriculture

Research Method

Quasi-Experimental method was used in the present study.
The present study was conducted in two stages viz.

- a) **Stage 1:** Development of Constructivist lesson plan for teaching social science to the experimental group.
- b) **Stage 2: Implementation:** Implementation of Constructivist Approach based lesson plan to the experimental group and traditional teaching approach to the control group.

Sample

The sample of the study consisted of 80 social science students (40 for controlled group; 40 for experimental group) of upper primary level. The sample of the present study consisted of 80 social science students of upper primary level (CBSE Board) Punjab International Public School. The selection of the school had been done through purposive sampling method. Further, simple random sampling method was used to divide the students in two groups.

Tools

For grouping the students, Ravens Progressive Matrices was used. Lesson Plan was developed based on framework of constructivist approach. Students of experimental group were taught according to constructivist approach. Students of controlled group were taught according to traditional approach.

FINDINGS OF THE STUDY

1. The constructivist approach was found effective in improving academic achievement in social science ($F=240.330$, $p=.000$) among upper primary level students when pre-test on academic achievement in social science and intelligence were taken as covariates. The finding implies that the learners subjected to traditional learning memorized certain concepts to succeed in an outcome-based examination. However, when retention was measured, it was found that students in the control group tended to have forgotten the content. On the contrary, it can be argued that students subjected to the constructivist approach were opting to learn for the sake of learning rather than passing a test. The result of the study is in tune with the findings of Lord (1999), Yildirim, Ozden and Asku (2001). If constructivism is properly integrated into the existing curriculum and transacted meaningfully, we can assure that the achievement in social studies also get improved. The daily assignments given to the students, projects employed by the students, various work sheets and self-evaluation forms have positively contributed to the improvement in the achievement in social studies. Various activities were provided by the investigator to the students especially in the exploration and elaboration stages and these activities helped the students to construct the concepts in a meaningful way.
2. There is no significant difference among the low, average and high intelligent students of experimental and control groups ($F=.153$, $p>0.05$) in their academic achievement in social science. Irrespective of students' intelligence levels constructivist approach affected all students in their academic achievement in social science. So it is concluded that intervention affected all students equally irrespective of their intelligence levels on academic achievement in social science. The result is contrary to the findings of Jensen (1998), Detterman and Sternberg (1993) who found that achievement and intelligence are correlated.
3. The dimension wise analysis of data concerning the academic achievement in social science found that in the entire dimensions experimental group scored high when compared to control group. 'Skill' ($t=18.51$) dimension showed high significant level (Significant at 0.01 level) in the experimental group which indicate that the constructivist approach helped to develop higher order thinking among students.

This research concluded that if science teachers could incorporate constructivist based teaching strategy into their teaching methods, there would be an improvement in academic performance of upper primary level students in social science. Investigation of this study proved that if students are taught by constructivist approach, they have shown same aptitude & attentiveness towards social science subject, it shows that methods of teaching is pay an important role. Therefore, through the process of constructivism

the learners will integrate their new knowledge with the previous one, which in turn will assist them in building their current conceptions. The teacher can plan, develop and implement various students centered activities, as to promote attitude towards social science. The better part of teaching can be achieved by adopting such innovative approaches of teaching. If learning is based on prior knowledge, then teachers must note that knowledge and provide learning environments that exploit inconsistencies between learner's current understandings and the new experiences before them. If students must apply their current understanding in new situations in order to build new knowledge, then teachers must engage students in learning, bringing student's current understandings to the forefront.

EDUCATIONAL IMPLICATIONS

1. The present research provides evidence that constructivism approach improves social science achievement. Hence constructivism approach can put an advantage, if the desire is to assist students to improve their knowledge & feeling towards social science.
2. The finding of the study suggests that achievement of the students raise when they actively participate in teaching-learning process after implementation of models of constructivist approach.
3. Social science can be made more enjoyable for students through constructivist approach, which also gives the added benefits of increased achievement.
4. The present study indicates that constructivist learning approach can help students to understand, integrate and clarify social science concept and also enhance their interest to participate in group in constructivist classroom. This research also more helpful to improve students' learning to enhance the quality of education & thus satisfaction of students.

SUGGESTIONS FOR FURTHER RESEARCH

The following are the suggestions for further research:

1. A study can be taken up to find the effectiveness of Constructivist Approach in different school subjects like language, science and mathematics in comparison with traditional method of teaching.
2. Similar study could be conducted with a larger sample and on students of classes IX and X.
3. Similar studies could be taken up to investigate the effectiveness of Constructivist Approach in schools adopting any Language as a medium of instruction.

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